PT. SINKO PRIMA ALLOY

TAMBAK OSOWILANGUN NO.61

PERGUDANGAN OSOWILANGUN PERMAI BLOK E7-E8

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File No.	: SPA-BM/PROD-62
Release Date	: 17 Januari 2024
Revisi	: 00

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1. Introduction

1.1 Intended Use

The medical air compressor is assembled by imported components, designed for supplying oil-free, dry and pure compressed air. It is of high quality, low noise, good appearance and easy to use. It is an ideal gas source in treatment by matching with many sorts of medical ventilators, anesthetic equipment.

Remark: The gas generated by Medical Air Compressor is a kind of breathing gas and breathing energy gas. It also can be used as driving energy of life support system. The gas can't be used in a stand-alone way. The air compressor can be matched with relevant equipment as a part of gas supply system.

1.2 Warnings

Please read the safety warnings before the operation to avoid injury or damage.

- Please read and understand the user manual fully before the operation.
- The equipment can be only installed, operated and maintained by qualified technician.
- Ensure that the operating voltage stated on the power supply corresponds to the main voltage input as marked on the compressor. Any unqualified personnel should not be allowed to repair the product.
- Pay attention to explosion proof and it can't be used in the presence of flammable anesthetics.
- The medical compressed air generated by Medical Air Compressor can be used only as breathing gas and surgical power compressed gas. It should not be provided for any other application which could impose unforeseen affects and compromise the expected availability and/or quality of medical compressed air.
- The air intake of compressor should be located in a place with minimal air contamination. The inlet should be provided with means to avoid ingress of other things beside air (e.g. insects, debris and water) on the location of the intake(s). Consideration should be given to the potential effects of prevailing winds on the location of the intake(s) which should be remote from chimney outlets.
- Compressor and matching equipment should be connected to Uninterruptible Power Supply.
- If a technical failure occurs, the user must immediately disconnect the power supply immediately and notify the supplier.

- ❖ Keep the original packing to ensure optimal protection of equipment for possible transportation of the unit.
- ❖ The motor must be stabilized before transportation.

~ Alternating Current (AC)	Attention
ON (power)	Must be recycled
OFF (power)	IPX0 Level 0 waterproofing rating
I Class I	According to the manual
Type B	CE standard

1.3 Operator Responsibility

Installation, operation and maintenance of the equipment must be carried out according to the manual. The Medical Air Compressor must be regularly checked. Operators should not use defective ones. The parts which have damaged, lost, distorted or contaminated must be replaced in time.

Without written approval of our company, any person can not make changes to the product. Operators should assume full responsibility of the consequences if any damage is caused by user's improper usage or repair.

2. Equipment Description

① Control panel

② Power switch

③ Flexible casters

④ Output port

⑤ Water trap

⑥ Timer

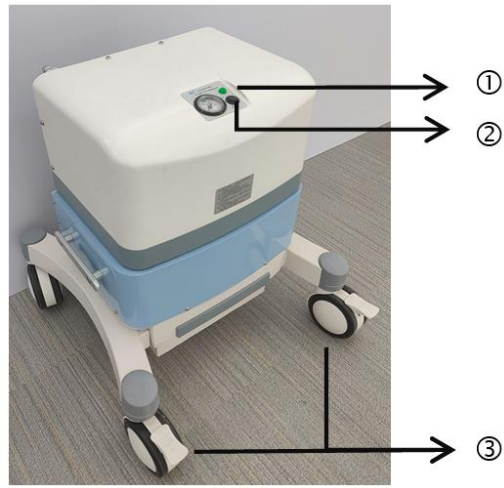
⑦ Power input

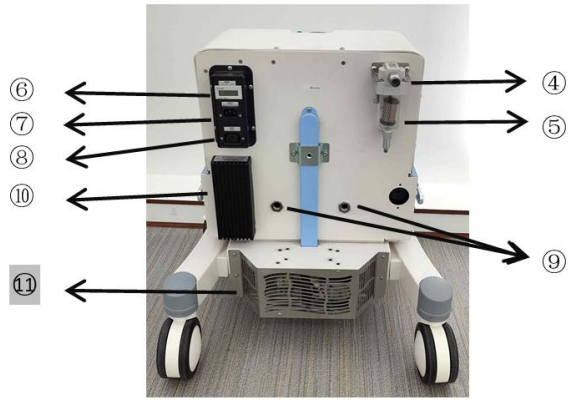
⑧ Power output

⑨ Stabilizing screws

⑩ Air intake filter

⑪ Cooling system





Compressed air pump produces compressed air with high temperature and high pressure. The compressed air will be cooled down by cooling system. The water trap will drain off the moist in compressed air, and the pressure regulator will reduce the pressure of compressed air to operating pressure then finally the air can be supplied through the outlet.

3. Technical Data

Outlet flow	100L/min
Voltage/Frequency	220V/ 50Hz
Outlet connection	NIST
Sound level dB(A)	55dB(A)
Mode of operation	Continuously
Separation of condensed water	Automatic
Outlet pressure	0.25Mpa - 0.4Mpa (3bar - 4bar)
Operating pressure of safety valve	7bar
Adjustment of outlet air pressure	Pressure regulator

4. Installation and Operation

A. User should remove the package and check the exterior of the compressor to find if there is any damage in the exterior.

B. Check the relevant parts to find if they are complete.

C. Connect power supply and test functions of the compressor.

D. The ground where the Medical Air Compressor is going to be operated should be flat.

E. The stabilizing screws for transport should be removed and replaced by two plugs configured before using.

F. Power supply cord should be well grounded to avoid damage to user under abnormal conditions.

G. The following requirements of power socket should be satisfied to avoid connect problems and fire hazards.

- ❖ Operating electric current state on the power supply should correspond to the main power input as described in this document.
- ❖ With perfect function.

H. The rated value of power cable should be adapted to the maximum operating current of the compressor to avoid accident caused by overheat power wires after long time use.

I. The compressor should be operated in a well-ventilated place without any flammable gas and corrosive gas present.

J. Store the compressor in an indoor place if the compressor is not intended to

be used in short time.

4.1 Transport and Storage Conditions, Location of Supply System

4.1.1 Normal working condition

Environment temperature：- 5℃～40℃

Relative humidity：Not higher than 80%

Atmospheric pressure：860hpa～1060hpa

4.1.2 Transport and storage conditions

Environment temperature：- 40℃～55℃

Relative humidity：Not higher than 93%

Atmospheric pressure：500hpa～1060hpa

The compressor should be stored in an indoor well-ventilated place without any causticity air presents. The compressor should be packed according to the requirements of sale contract with proper label or mark. Avoids hardly rattling during transport.

4.1.3 Location of supply systems

Gas and non-cryogenic liquid cylinder supply systems should not be located in the same room with medical air compressors, oxygen concentrators or vacuum supply systems

Locating a supply systems should consider potential hazards (e.g. contamination and fires) arising from other equipment or supply systems in the same room

These locations should be provided with drainage facilities

NOTE: The ambient temperature in rooms for supply systems should be within the range between 10℃ to 40℃.

4.2 Removal of Transport Stabilizers

Before operation, the stabilizing screws should be removed and the configured plastic plugs should be fixed to the holes.

4.3 Operation Process

1. Connect power supply according to the marking on the compressor and turn on the control switch, indicator light lights up. Compression pump, cooling system （fan), freezing system and timer should be able to work properly after the Medical Air Compressor starts to work.
2. The indicating value of pressure gauge increases slowly till maintains between 0.25MPa～0.4MPa.
3. The automatic drainage system starts to work and the vent of cooling system discharges a hot gas flow freely, which means the compressor is working well and is ready to work with matched equipment.
4. Turn off power switch and disconnect the power supply after using. Release the air and humidity in the circuit system.

5. Performance Inspection

5.1 Whole Equipment Test

The lighting of indicator light means that the compressor is working. The value of pressure gauge increases slowly from 0 and maintain between 0.3~0.4MPa means that the compression pump is working well.

The output pressure can be adjusted to match different oxygen source. Please maintain the compressor in time when the output pressure is less than 0.2MPa.

5.2 Cooling System and Refrigeration System Test

The cooling fan and refrigeration chip should work properly when the refrigeration system is operating.

The cooling system discharges a strong heat gas flow while the compressor is working. The discharging means the cooling fan is working well. A very simple test method is putting a hand nearby the cooling gas outlet to feel if there is a strong heat gas flow.

- Turn off the compressor if any fault is found and do not use it again until it’s repaired.
- Fault of the cooling fan may cause cooling failure. Under this condition, there may be "icing" phenomenon after long hours operating.

5.3 Electric Power Test

Turn on power switch and check the indicator light and pressure gauge. Lighting of indicator light and stably working pressure mean that power supply of the compressor has been switched on.

5.4 Automatic Exhaust Test

The value of pressure gauge rises up at the beginning then fall down till it is maintained stably within the operating range. The changing of pressure means that the overflow valve is working properly.

6. Troubleshooting

Problem	Reasonable cause	Solve measure
Output pressure is out of the operating range.	1. Improper adjustment of decompress system or operating pressure. 2. The pressure gauge is damaged, or its error is large. 3. The gas transport pipe is broken or loosen off.	1. Adjust relevant pressures 2. Test/replace the pressure gauge. 3. Test/replace the gas transport pipe.
Too much moisture in output compressed air.	1. Drainage system failure. 2. Improper adjustment. 3. Cooling system failure.	1. Replace or adjust drainage system. 2. Check and adjust the pressure. 3. Check refrigeration system.
Pressure gauge indicates no pressure.	1. Power interruption / protective tube fusing. 2. Compressor pump doesn't work.	1. Check and reconnect the power supply / replace a fuse with same specification.

	3. Gas transport pipe is damaged or broken. 4. Over-heat protection of compression.	2. Check the compressor pump and its power supply. 3. Test the connecting pipe. 4. Check the temperature of compression pump and working status of cooling fan.
Pressure gauge indicates pressure but there is no output gas.	1. Decompress system is blocked up. 2. Output circuit is blocked up.	1. Clean decompress valve. 2. Check circuit connector / output circuit.
Unable to start the compress pump up.	1. Power supply outage or low voltage. 2. Compression pump has no power supply. 3. Compression pump fault. 4. Fuse/switch fault.	1. Check the power supply. 2. Check the power supply. 3. Replace compression pump. 4. Check fuse / switch.

7. Maitenance

7.1 Clean the Air Intake Filter

It is suggested that the black air intake filter should be cleaned once a week. Wash the filter and it should be dry when be put back in place.

7.2 Replace the Pump Filter

The white pump filter should be replaced every 3000 hours. The change frequency depends on not only the service time but also the environmental cleanliness.

7.3 Stabilizing the Compressor Before Shipping

Before shipment, the plastic plugs (A) must be removed and can be placed in the holes (B). The stabilizing screws on the shelf (C) must be fixed again to prevent movement.

7.4 Shut-down

Disconnect the power supply if the equipment is not going to be used for a long time.

MEDICAL AIR COMPRESSOR

MAC-02

Manual Book

Elitech® TECHNOVISION